



CHAPTER 7

Using RTMT with Cisco Intercompany Media Engine

RTMT provides a set of default monitoring objects that assist you in monitoring the health of the Cisco Intercompany Media Engine product. You monitor the Cisco Intercompany Media Engine product on the Cisco IME server and on the Cisco Unified Communications Manager server. The objects on the Cisco Unified Communications Manager contain information about learned routes and call activities. The objects on the Cisco IME server contain information about network and server activity.

The system logs data every five minutes for predefined counters.

This chapter contains information on the following topics:

- [Installing RTMT, page 7-1](#)
- [Uninstalling RTMT, page 7-3](#)
- [Launching RTMT, page 7-3](#)
- [Navigating RTMT, page 7-4](#)
- [Monitoring Predefined Cisco Intercompany Media Engine Objects in RTMT, page 7-5](#)
- [Working with Trace and Log Central, page 7-8](#)
- [Related Topics, page 7-8](#)

Installing RTMT

A single copy of RTMT that is installed on your computer lets you monitor only one server or one cluster at a time. For example, you can monitor either of the following entities:

- A Cisco Unified Communications Manager product on one server
- A server on a cluster to monitor the health of the cluster

To monitor a product on a different server, such as the Cisco Intercompany Media Engine product on the Cisco IME server, you must first log off the server before you can log on to the other server.

Consider the following, before you install RTMT:

- On a client machine, you can install RTMT client downloaded from only one product type such as Cisco Unified Communications Manager or Cisco Intercompany Media Engine. Installing RTMT client from different product types on the same client machine is not supported.

- The current RTMT download may not support earlier releases of Cisco Unified Communications Manager. Some releases of Cisco Unified Communications Manager may require different versions of RTMT to be installed on your computer (one version per Cisco Unified Communications Manager release). Verify that the RTMT version that you install is compatible with the Cisco Unified Communications Manager that you are monitoring. If the RTMT version that you are using is not compatible with the server that you want to monitor, the system prompts you to download the compatible version.
- Your computer stores the user preferences, such as the IP address and RTMT frame size, from the RTMT client that last exits.

To install RTMT from the Cisco IME server, perform the following procedure:

**Note**

When you install RTMT on a Windows Vista platform, the following User Account Control pop-up message displays: “An unidentified program wants to access your computer.” Click **Allow** to continue working with RTMT.

**Note**

When you launch RTMT, log into the same product type from which you downloaded the RTMT client application. If you log into a different product type, RTMT will not launch nor work properly.

Procedure

Step 1 Start your preferred operating system browser.

**Note**

Microsoft Internet Explorer has a known bug, which does not let you download IME RTMT from an IME server. You can use other browsers like FireFox, Safari, and so forth.

Step 2 In the address bar of the web browser, enter the following case-sensitive URL:

`https://<Cisco IME-server-name>:{8443}/ast/rtmtinstaller.jsp`

where: <Cisco IME-server-name> equals the name or IP address of the Cisco IME server

**Note**

You can optionally specify a port number.

Step 3 A Security Alert dialog box displays. Click the appropriate button.

Step 4 Enter the Administrator username and password that you specified during installation.

Step 5 Do one of the following:

- If you are planning to install the RTMT tool on a computer that is running the Microsoft Windows operating system, click the RTMT Windows Installer link.
- If you are planning to install the RTMT tool on a computer that is running the Linux operating system, click the RTMT Linux Installer link.

Step 6 Download the executable to the preferred location on your client.

Step 7 To install the Windows version, double-click the RTMT icon that displays on the desktop or locate the directory where you downloaded the file and run the RTMT installation file.

The extraction process begins.

- Step 8** To install the Linux version, ensure that the file has execute privileges; for example, enter the following command, which is case sensitive: **chmod +x CcmServRtmtPlugin.bin**
- Step 9** After the RTMT welcome window displays, click **Next**.
- Step 10** To accept the license agreement, click **I accept the terms of the license agreement**; then, click **Next**.
- Step 11** Choose the location where you want to install RTMT. If you do not want to use the default location, click **Browse** and navigate to a different location. Click **Next**.
- Default installation paths specify the following:
- Windows—C:\Program Files\Cisco\Unified-Communications-Manager Serviceability\JRtmt
 - Linux—/opt/Cisco/Unified-Communications-Manager_Serviceability/JRtmt
- Step 12** To begin the installation, click **Next**.
- The Setup Status window displays. Do not click **Cancel**.
- Step 13** To complete the installation, click **Finish**.
-

Uninstalling RTMT



Tip

When you use RTMT, it saves user preferences and the module jar files (the cache) locally on the client machine. When you uninstall RTMT, you choose whether to delete or save the cache.

On a Windows client, you uninstall RTMT through **Add/Remove Programs** under the Control Panel. (Choose **Start > Settings > Control Panel > Add/Remove Programs**.)

To uninstall RTMT on a Hat Linux with KDE and/or Gnome client, choose **Start > Accessories > Uninstall Real-time Monitoring tool** from the task bar.



Note

When you uninstall RTMT on a Windows Vista machine, the following User Account Control pop-up message displays: “An unidentified program wants to access your computer.” Click **Allow** to continue working with RTMT.

Launching RTMT



Note

When you use RTMT on a Windows Vista machine, the following User Account Control pop-up message displays: “An unidentified program wants to access your computer.” Click **Allow** to continue working with RTMT.

Procedure

Step 1 After you install the plug-in, perform one of the following tasks:

- From your Windows desktop, double-click the **Real-Time Monitoring Tool** icon.
- Choose **Start > Programs > Cisco > Unified-Communications-Manager Serviceability > Real-Time Monitoring Tool > Real-Time Monitoring Tool**.

The Real-Time Monitoring Tool Login window displays.

Step 2 In the Host IP Address field, enter either the IP address or host name of the server or (if applicable) first server in a cluster.

Step 3 In the User Name field, enter the Administrator username for the application.

Step 4 In the Password field, enter the Administrator user password that you established for the username.



Note If the authentication fails or if the server is unreachable, the tool prompts you to reenter the server and authentication details; or, you can click the Cancel button to exit the application. After the authentication succeeds, RTMT launches the monitoring module from local cache or from a remote server, when the local cache does not contain a monitoring module that matches the backend version.

Step 5 Enter the port that the application will use to listen to the server. The default setting specifies 8443.



Note The Trace and Log Central tool in RTMT uses the port number that you specify to communicate with all the nodes in a cluster. If your system uses port mapping and all Cisco Intercompany Media Engine nodes do not map to the same port number, some RTMT tools can not connect to those nodes. The tools that will fail to connect include Trace and Log Central, Job Status, SyslogViewer, Perfmon Log Viewer, and FTP/SFTP Configuration.

Step 6 Check the **Secure Connection** check box.

Step 7 Click **OK**.

Step 8 When prompted, add the certificate store by clicking **Yes**.

Real-Time Monitoring Tool RTMT starts.

Navigating RTMT

The RTMT window comprises the following main components:

- Menu Bar, which includes some or all of the following menu options, depending on your configuration:
 - File—Allows you to save, restore, and delete existing RTMT profiles, monitor Java Heap Memory Usage, go to the Serviceability Report Archive window in Cisco Unified Serviceability, log off, or exit RTMT.

**Note**

The RTMT menu option **File > Cisco Unified Reporting** lets you access Cisco Unified Reporting from RTMT. You can use the Cisco Unified Reporting application to snapshot Cisco Unified Communications Manager cluster data for inspection or troubleshooting. Refer to the *Cisco Unified Reporting Administration Guide* for more information.

- System—Allows you to monitor system summary, monitor server resources, work with performance counters, work with alerts, collect traces, and view syslog messages.
 - Communications Manager—Allows you to view Cisco Unified Communications Manager summary information on the server; monitor call-processing information; and view and search for devices, monitor services, and CTI.
 - Unity Connection—Allows you to view the Port Monitor tool.
 - IME Service—Allows you monitor server and network activity of the Cisco Intercompany Media Engine server.
 - Edit—Allows you to configure categories (for table format view), set the polling rate for devices and performance monitoring counters, hide the quick launch channel, and edit the trace setting for RTMT.
 - Window—Allows you to close a single RTMT window or all RTMT windows.
 - Application—Depending on your configuration, allows you to browse the applicable web pages for Cisco Unified Communications Manager Administration, Cisco Unified Serviceability, Cisco Unity Connection Administration, and Cisco Unity Connection Serviceability.
 - Help—Allows you to access RTMT documentation online help or to view the RTMT version.
- Quick Launch Channel—You can click this pane with tabs on the left side of the RTMT window to display information about the server or information about the applications. The tab contains groups of icons that you can click to monitor various objects.
 - Monitor pane—Pane where monitoring results display.

Monitoring Predefined Cisco Intercompany Media Engine Objects in RTMT

RTMT provides a set of predefined monitoring objects that assist you in monitoring the health of the Cisco Intercompany Media Engine feature. On the Cisco Unified Communications Manager server, you can monitor the call processing activity and routing activity of Cisco IME calls. On the Cisco Intercompany Media Engine server, you can monitor a variety of statistics related to Internet bandwidth and IME distributed cache status. You need objects from both servers to monitor the performance of the Cisco Intercompany Media Engine product.

This section contains the following information:

- [Monitoring the Intercompany Media Services Predefined Object on the Cisco Unified Communications Manager Server, page 7-6](#)
- [Monitoring Objects on the Cisco IME Server, page 7-7](#)

Monitoring the Intercompany Media Services Predefined Object on the Cisco Unified Communications Manager Server



Tip

The polling rate in each precanned monitoring window remains fixed, and the default value specifies 30 seconds. If the collecting rate for the AMC (Alert Manager and Collector) service parameter changes, the polling rate in the precanned window also updates. In addition, the local time of the RTMT client application, not the backend server time, provides the basis for the time stamp in each chart.



Tip

To zoom in on the monitor of a predefined object, click and drag the left mouse button over the area of the chart that interests you. Release the left mouse button when you have the selected area. RTMT updates the monitored view. To zoom out and reset the monitor to the initial default view, press the “R” key.

The Intercompany Media Services monitoring category monitors the following items:

- **Routing**—Displays the total number of Cisco Intercompany Media Engine routes that Cisco Unified Communications Manager maintains. This total includes the following routes:
 - Learned routes that represent the phone numbers that the Cisco Intercompany Media Engine client learned and that exist in the Cisco Unified Communications Manager routing tables
 - Unique domains of peer enterprises for which Cisco Intercompany Media Engine routes exist
 - Published routes that represent the number of direct inward dialing numbers (DIDs) that were published successfully to the IME distributed hash table across all Cisco Intercompany Media Engine services
 - Rejected routes that represent the number of learned routes that got rejected because the administrator blocked them.

These charts represent the following performance counters for the Cisco IME Client performance object: RoutesLearned, DomainsUnique, RoutesPublished, and RoutesRejected.

To display information on routing, choose **CallManager > Cisco IME Client > Routing**.

- **Call Activities**—Allows you to monitor the total number of Cisco Intercompany Media Engine calls. This total includes the following types of calls:
 - Calls that were attempted (including calls that were accepted, busy, no answer, and failed)
 - Calls that were received
 - Calls that were set up (that is, made by Cisco Unified Communications Manager and accepted by the remote party)
 - Calls that were accepted (that is, received by Cisco Unified Communications Manager and answered by the called party)
 - Calls that completed fallback to the PSTN
 - Calls that did not successfully fallback to the PSTN.

These charts represent the following performance counters for the Cisco IME Client performance object: CallsAttempted, CallAccepted, CallsReceived, CallsSetup, IMESetupsFailed, and FallbackCallsFailed.

To display information on call activities, choose **CallManager > Cisco IME Client > Call Activities**.

For more information about available objects and counters, see “[Cisco Intercompany Media Engine Performance Objects and Counters](#)” section on page 11-1.

Monitoring Objects on the Cisco IME Server

The Cisco IME server contains the following objects:

- [Monitoring IME Service, page 7-7](#)
- [Monitoring IME System Performance, page 7-8](#)

Monitoring IME Service

The IME Service category monitors the following items:

- Network Activity—Displays the activity on the Cisco Unified Communications Manager that relates to Cisco Intercompany Media Engine. The Network Activity object displays these charts:
 - IME Distributed Cache Health—Displays the health of the IME distributed cache based on the IMEDistributedCacheHealth counter for the IME Server performance object.
 - IME Distributed Node Count—Displays an approximation of the number of nodes in the IME distributed cache, based on the value of the IMEDistributedCacheNodeCount counter for the IME Server performance object. Because each physical Cisco Intercompany Media Engine server contains multiple nodes, the number that displays in the chart does not indicate the number of physical Cisco Intercompany Media Engine servers that participate in the IME distributed cache.
 - Internet BW Received—Displays the amount of bandwidth in Kbits/s that the Cisco IME service uses for incoming Internet traffic and represents the InternetBandwidthRecv counter for the IME Server performance object.
 - Internet BW Send—Displays the amount in Kbits/s that the Cisco IME service uses for outgoing Internet traffic and represents the InternetBandwidthSend counter for the IME Server performance object.
 - IME Distributed Cache Stored Data Records—Displays the number of IME Distributed Cache records that the Cisco Intercompany Media Engine server stores and represents the IMEDistributedCacheStoredData counter for the IME Server performance object.

To display information on network activity, choose **Cisco IME Service > Network Activity**.

- Server Activity—Allows you to monitor the activity on the Cisco Intercompany Media Engine server. The Server Activity object displays these charts:
 - Number of Registered Clients—Displays the current number of clients that connect to the Cisco IME service and represents the value of the ClientsRegistered counter for the IME Server performance object.
 - IME Distributed Cache Quota—Indicates the number of individual DIDs that can be written into the IME Distributed Cache, by Cisco Unified CMs attached to this IME server. This number is determined by the overall configuration of the IME Distributed Cache, and the IME license installed on the IME server.
 - IME Distributed Cache Quota Used—Indicates the total number of unique DID numbers that have been configured, to be published via enrolled patterns for Intercompany Media Services, by Cisco Unified CMs currently attached to this IME server.

- Terminating VCRs—Indicates the total number of IME voice call records that are stored on the Cisco IME server for the terminating side of a call. These records can be used for validation of learned routes.
- Validations Pending—Displays the number of pending validations on the Cisco IME service as well as the threshold for validations. This chart represents the ValidationsPending counter for the Cisco IME Server performance object.

To display information on server activity, choose **Cisco IME Service > Server Activity**.

For more information about available objects and counters, see [“Cisco Intercompany Media Engine Performance Objects and Counters”](#) section on page 11-1.

Monitoring IME System Performance

The IME System Performance monitoring category provides the SDL Queue object that monitors the number of signals in the SDL queue and the number of signals that were processed for a particular signal distribution layer (SDL) queue type. The SDL queue types comprise high, normal, low, and lowest queue. You can monitor the SDL queue for a particular server or for an entire cluster (if applicable).

To display information on the SDL Queue, choose **Cisco IME Service > SDL Queue**. Select the type from the SDL Queue Type drop-down list box.

For more information about available objects and counters, see [“Cisco Intercompany Media Engine Performance Objects and Counters”](#) section on page 11-1.

Working with Trace and Log Central

The trace and log central feature in the Cisco Unified Real Time Monitoring Tool (RTMT) allows you to configure on-demand trace collection for a specific date range or an absolute time. You can collect trace files that contain search criteria that you specify and save the trace collection criteria for later use, schedule one recurring trace collection and download the trace files to a FTP or SFTP server on your network or to local (localhost) files on the Cisco IME, or collect a crash dump file.

If you download trace files to the localhost directories on the Cisco IME, you can access the files by opening an SFTP client. You connect to the Cisco IME server by using the adminftp that you configured during installation.

For more information on using RTMT to collect traces, refer to the *Cisco Unified Real Time Monitoring Tool Administration Guide*.

Related Topics

- [Installing RTMT, page 7-1](#)
- [Uninstalling RTMT, page 7-3](#)
- [Launching RTMT, page 7-3](#)
- [Navigating RTMT, page 7-4](#)
- [Monitoring Predefined Cisco Intercompany Media Engine Objects in RTMT, page 7-5](#)
- [Working with Trace and Log Central, page 7-8](#)

- [Cisco IME Configuration in Cisco Unified Communications Manager Administration](#), page 3-1
- [Cisco Intercompany Media Engine Performance Objects and Counters](#), page 11-1
- [Cisco Intercompany Media Engine Alert Descriptions and Default Settings](#), page 12-1
- *Cisco Unified Real Time Monitoring Tool Administration Guide*

